# **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

1. (Currently amended) A method of treatment of bacterial infections caused by S.aureus, E.faecalis, M.catarrhalis, or S.pneumoniae in mammals, which method comprises the administration to a mammal in need of such treatment of an effective amount of a compound of formula (I) or a pharmaceutically acceptable derivative thereof:

A-B-(CH<sub>2</sub>)<sub>n</sub> 
$$N - R^4$$

$$Z^{1} Z^{2} Z^{3} N^{2}$$

$$Z^{2} Z^{3} N (I)$$

wherein:

one of  $Z^1$ ,  $Z^2$ ,  $Z^3$ ,  $Z^4$  and  $Z^5$  is N or  $CR^{1a}$  and the remainder are CH;

R¹ is selected from hydroxy;  $(C_{1-6})$  alkoxy optionally substituted by  $(C_{1-6})$ alkoxy, amino, piperidyl, guanidino or amidino optionally N-substituted by one or two  $(C_{1-6})$ alkyl, acyl or  $(C_{1-6})$ alkylsulphonyl groups, NH2CO, hydroxy, thiol,  $(C_{1-6})$ alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or  $(C_{1-6})$ alkylsulphonyloxy;  $(C_{1-6})$ alkoxy-substituted  $(C_{1-6})$ alkyl; halogen;  $(C_{1-6})$ alkyl;  $(C_{1-6})$ alkylthio; trifluoromethyl; nitro; azido; acyl; acyloxy; acylthio;  $(C_{1-6})$ alkylsulphonyl;  $(C_{1-6})$ alkylsulphoxide; arylsulphonyl; arylsulphoxide or an amino, piperidyl, guanidino or amidino group optionally N-substituted by one or two  $(C_{1-6})$ alkyl, acyl or  $(C_{1-6})$ alkylsulphonyl groups, or when one of Z¹, Z², Z³, Z⁴ and Z⁵ is N, R¹ may instead be hydrogen;

R<sup>1a</sup> is selected from hydrogen and the groups listed above for R<sup>1</sup>;

R<sup>3</sup> is in the 2- or 3-position and is:

carboxy;  $(C_{1-6})$ alkoxycarbonyl; aminocarbonyl wherein the amino group is optionally substituted by hydroxy,  $(C_{1-6})$ alkyl, hydroxy  $(C_{1-6})$ alkyl, aminocarbonyl $(C_{1-6})$ alkyl,  $(C_{2-6})$ alkenyl,  $(C_{1-6})$ alkylsulphonyl, trifluoromethylsulphonyl,  $(C_{1-6})$ alkenylsulphonyl,  $(C_{1-6})$ alkoxycarbonyl,  $(C_{1-6})$ alkenyloxycarbonyl or  $(C_{2-6})$ alkenylcarbonyl and optionally further substituted by  $(C_{1-6})$ alkyl, hydroxy  $(C_{1-6})$ alkyl, aminocarbonyl $(C_{1-6})$ alkyl or  $(C_{2-6})$ alkenyl; cyano; tetrazolyl; 2-oxo-oxazolidinyl optionally substituted by  $(C_{1-6})$ alkyl, aminocarbonyl; 3-hydroxy-3-cyclobutene-1,2-dione-4-yl; 2,4-thiazolidinedione-5-yl; tetrazol-5-ylaminocarbonyl; 1,2,4-triazol-5-yl optionally substituted by  $(C_{1-6})$ alkyl, or 5-oxo-1,2,4-oxadiazol-3-yl; or

 $R^3$  is in the 2- or 3-position and is  $(C_{1-4})$ alkyl or ethenyl substituted with any of the groups listed above for  $R^3$  and 0 to 2 groups  $R^{12}$  independently selected from:

thiol; halogen; (C<sub>1-6</sub>)alkylthio; trifluoromethyl; azido; (C<sub>1-6</sub>)alkoxycarbonyl; (C<sub>1-6</sub>)alkylcarbonyl; (C<sub>2-6</sub>)alkenyloxycarbonyl; (C<sub>2-6</sub>)alkenylcarbonyl; hydroxy optionally substituted by (C<sub>1-6</sub>)alkyl, (C<sub>2-6</sub>)alkenyl, (C<sub>1-6</sub>)alkoxycarbonyl, (C<sub>1-</sub> 6)alkylcarbonyl, (C2-6)alkenyloxycarbonyl, (C2-6)alkenylcarbonyl or aminocarbonyl wherein the amino group is optionally substituted by (C<sub>1-6</sub>)alkyl, (C<sub>2-6</sub>)alkenyl, (C<sub>1-</sub> 6)alkylcarbonyl or (C2-6)alkenylcarbonyl; amino optionally mono- or disubstituted by (C<sub>1-6</sub>)alkoxycarbonyl, (C<sub>1-6</sub>)alkylcarbonyl, (C<sub>2-6</sub>)alkenyloxycarbonyl, (C<sub>2-</sub> 6)alkenylcarbonyl, (C<sub>1-6</sub>)alkyl, (C<sub>2-6</sub>)alkenyl, (C<sub>1-6</sub>)alkylsulphonyl, (C<sub>2-</sub> 6)alkenylsulphonyl or aminocarbonyl wherein the amino group is optionally substituted by (C<sub>1-6</sub>)alkyl or (C<sub>2-6</sub>)alkenyl; aminocarbonyl wherein the amino group is optionally substituted by (C<sub>1-6</sub>)alkyl, hydroxy (C<sub>1-6</sub>)alkyl, aminocarbonyl(C<sub>1-</sub> 6)alkyl, (C2-6)alkenyl, (C1-6)alkoxycarbonyl, (C1-6)alkylcarbonyl, (C2-6)alkenyloxycarbonyl or (C2-6)alkenylcarbonyl and optionally further substituted by (C<sub>1-6</sub>)alkyl, hydroxy (C<sub>1-6</sub>)alkyl, aminocarbonyl(C<sub>1-6</sub>)alkyl or (C<sub>2-6</sub>)alkenyl; oxo; (C<sub>1-6</sub>)alkylsulphonyl; (C<sub>2-6</sub>)alkenylsulphonyl; or (C<sub>1-6</sub>)aminosulphonyl wherein the amino group is optionally substituted by (C<sub>1-6</sub>)alkyl or (C<sub>2-6</sub>)alkenyl; provided that when R<sup>3</sup> is disubstituted with hydroxy or amino and carboxy containing substituents these may optionally together form a cyclic ester or amide linkage, respectively;

and provided that  $R^3$  is other than  $(C_{1-4})$ alkyl or ethenyl substituted by  $(C_{1-6})$ alkoxycarbonyl or aminocarbonyl optionally substituted by  $(C_{1-6})$ alkyl,  $(C_{2-6})$ alkenyl,  $(C_{1-6})$ alkoxycarbonyl,  $(C_{1-6})$ alkylcarbonyl,  $(C_{2-6})$ alkenyloxycarbonyl or

 $(C_{2-6})$ alkenylcarbonyl and optionally further substituted by  $(C_{1-6})$ alkyl, hydroxy  $(C_{1-6})$ alkyl, aminocarbonyl $(C_{1-6})$ alkyl or  $(C_{2-6})$ alkenyl and 0 to 2 groups  $R^{12}$ ;

wherein R<sup>10</sup> is selected from (C<sub>1-4</sub>)alkyl; (C<sub>2-4</sub>)alkenyl; aryl; a group R<sup>12</sup> as defined above; carboxy; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C<sub>1-6</sub>)alkyl, (C<sub>2-6</sub>)alkenyl, (C<sub>1-6</sub>)alkylsulphonyl, trifluoromethylsulphonyl, (C<sub>1-6</sub>)alkenylsulphonyl, (C<sub>1-6</sub>)alkoxycarbonyl, (C<sub>1-6</sub>)alkylcarbonyl, (C<sub>2-6</sub>)alkenyloxycarbonyl or (C<sub>2-6</sub>)alkenylcarbonyl and optionally further substituted by (C<sub>1-6</sub>)alkyl or (C<sub>2-6</sub>)alkenyl; cyano; or tetrazolyl;

 $\mathsf{R}^4$  is a group  $-\mathsf{CH}_2\text{-}\mathsf{R}^5$  in which  $\mathsf{R}^5$  is selected from:

n is 0, 1 or 2;

either A-B is NHC(O)NH or NHC(O)O, or

A is  $NR^{11}$ , O,  $S(O)_X$  or  $CR^6R^7$  and B is  $NR^{11}$ , O,  $S(O)_X$  or  $CR^8R^9$  where x is 0, 1 or 2 and wherein:

each of R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> is independently selected from: H; thiol; (C<sub>1-6</sub>)alkylthio; halo; trifluoromethyl; azido; (C<sub>1-6</sub>)alkyl; (C<sub>2-6</sub>)alkenyl; (C<sub>1-6</sub>)alkoxycarbonyl; (C<sub>1-6</sub>)alkylcarbonyl; (C<sub>2-6</sub>)alkenyloxycarbonyl; (C<sub>2-6</sub>)alkenylcarbonyl; hydroxy, amino or aminocarbonyl optionally substituted as for corresponding substituents in R<sup>3</sup>; (C<sub>1-6</sub>)alkylsulphonyl; (C<sub>2-6</sub>)alkenylsulphonyl; or (C<sub>1-6</sub>)aminosulphonyl wherein the amino group is optionally substituted by (C<sub>1-6</sub>)alkyl or (C<sub>1-6</sub>)alkenyl; or R<sup>6</sup> and R<sup>8</sup> together represent a bond and R<sup>7</sup> and R<sup>9</sup> are as above defined;

or  $R^6$  and  $R^8$  together represent -O- and  $R^7$  and  $R^9$  are both hydrogen; or  $R^6$  and  $R^7$  or  $R^8$  and  $R^9$  together represent oxo; and each  $R^{11}$  is independently H, trifluoromethyl,  $(C_{1-6})$ alkyl,  $(C_{1-6})$ alkenyl,  $(C_{1-6})$ alkoxycarbonyl,  $(C_{1-6})$ alkylcarbonyl, aminocarbonyl wherein the amino group is optionally substituted by  $(C_{1-6})$ alkoxycarbonyl,  $(C_{1-6})$ alkylcarbonyl,  $(C_{1-6})$ alkenyloxycarbonyl,  $(C_{1-6})$ alkenyloxycarbonyl,  $(C_{1-6})$ alkenyloxycarbonyl,  $(C_{1-6})$ alkenyloxycarbonyl and optionally further substituted by  $(C_{1-6})$ alkyl or  $(C_{1-6})$ alkenyl; provided that A and B cannot both be selected from  $NR^{11}$ , O and  $S(O)_X$  and when one of A and B is CO the other is not CO, O or  $S(O)_X$ .

### Claims 2-11 (Cancelled).

12. (Original) A pharmaceutical composition for use in the treatment of bacterial infections in mammals comprising a compound of formula (I) as defined in claim 1, or a pharmaceutically acceptable derivative thereof, and a pharmaceutically acceptable carrier.

### 13. (Cancelled).

- 14. (Previously presented) A method according to claim 1 which comprises administering a compound of formula (I) of claim 1 or a pharmaceutically acceptable derivative thereof wherein  $\mathbb{R}^3$  is other than  $(C_{1-6})$ alkoxycarbonyl; optionally substituted aminocarbonyl, CN or COOH.
- 15. (Previously presented) A method according to claim 1 which comprises administering a compound of formula (I) of claim 1 or a pharmaceutically acceptable derivative thereof in which  $Z^5$  is CH or N and  $Z^1$ - $Z^4$  are each CH.
- 16. (Previously presented) A method according to claim 1 which comprises administering a compound of formula (I) of claim 1 or a pharmaceutically acceptable derivative thereof in which  $R^1$  is methoxy, amino- or guanidino- $(C_{3-5})$ alkyloxy, guanidino( $C_{3-5}$ )alkyloxy, piperidyl( $C_{3-5}$ )alkyloxy, nitro or fluoro, and  $R^{1a}$  is hydrogen.
- 17. (Previously presented) A method according to claim 1 which comprises administering a compound of formula (I) of claim 1 or a pharmaceutically

acceptable derivative thereof in which  ${\sf R}^3$  is in the 3-position and is  ${\sf CH_2CO_2H}$  or 2-oxo-oxazolidinyl.

- 18. (Previously presented) A method according to claim 1 which comprises administering a compound of formula (I) of claim 1 or a pharmaceutically acceptable derivative thereof in which AB(CH<sub>2</sub>)<sub>n</sub> is (CH<sub>2</sub>)<sub>3</sub>.
- 19. (Previously presented) A method according to claim 1 which comprises administering a compound of formula (I) of claim 1 or a pharmaceutically acceptable derivative thereof in which  $R^4$  is  $(C_{5-10})$ alkyl, unsubstituted phenyl $(C_{2-3})$ alkyl or unsubstituted phenyl $(C_{3-4})$ alkenyl.
- 20. (Previously presented) A method according to claim 1 which comprises administering a compound of formula (I) of claim 1 or a pharmaceutically acceptable derivative thereof in which  $Z^5$  is CH or N and  $Z^1$ - $Z^4$  are each CH;  $R^1$  is methoxy, amino- or guanidino- $(C_{3-5})$ alkyloxy, guanidino( $C_{3-5}$ )alkyloxy, piperidyl( $C_{3-5}$ )alkyloxy, nitro or fluoro, and  $R^{1a}$  is hydrogen;  $R^3$  is in the 3-position and is CH<sub>2</sub>CO<sub>2</sub>H or 2-oxo-oxazolidinyl; AB(CH<sub>2</sub>)<sub>n</sub> is (CH<sub>2</sub>)<sub>3</sub>; and  $R^4$  is (C<sub>5-10</sub>)alkyl, unsubstituted phenyl( $C_{2-3}$ )alkyl or unsubstituted phenyl( $C_{3-4}$ )alkenyl.
- 21. (Previously presented) A method according to claim 1 which comprises administering a compound which is:
- [3R, 4R]-1-Heptyl-3-(1-(R or S)-hydroxy-2-cyanoethyl)-4-[3-(6-methoxyquinolin-4-yl)propyl]piperidine;
- [3R, 4R]-1-Heptyl-3-(2-(R or S)-oxo-oxazolidin-5-yl)-4-[3-(6-methoxyquinolin-4-yl) propyl] piperidine;
- [3R, 4R]-1-Heptyl-3-(2-cyanoethyl)-4-[3-(6-methoxyquinolin-4-yl) propyl] piperidine;
- [3R, 4R]-1-Heptyl-3-(3-carboxyethyl)-4-[3-(6-methoxyquinolin-4-yl) propyl] piperidine;
- [3R, 4R]-1-Heptyl-3-carboxy-4-[3-(6-methoxyquinolin-4-yl) propyl] piperidine;
- [3R, 4R]-1-Heptyl-3-(carboxymethyl)-4-[3-(6-methoxyquinolin-4-yl) propyl] piperidine;
- [3R, 4R]-1-Heptyl-3-(1-(R or S)-hydroxy-2-carboxyethyl)-4-[3-(6-methoxyquinolin-4-yl)propyl]piperidine;
- [3R, 4R]-1-Heptyl-3-(2-(E-)-carboxyethenyl)-4-[3-(6-methoxyquinolin-4-yl)propyl]piperidine;

N-(cis-3-(R/S)-Ethoxycarbonyl-1-heptyl-4-(S/R)-piperidyl)-N'-(6-methoxyquinolin-4-yl)urea;

N-(cis-3-(R/S)-Ethoxycarbonyl-1-heptyl-4-(S/R)-piperidyl)-N'-(6-methoxy-[1,5]-naphthyridin-4-yl)urea;

N-(cis-3-(R/S)-Aminocarbonyl-1-heptyl-4-(S/R)-piperidyl)-N'-(6-methoxy-[1,5]-naphthyridin-4-yl)urea;

[3R, 4R]-1-Heptyl-4-[3-(R/S)-hydroxy-3-(6-methoxyquinolin-4-yl)propyl]-3-(2-(R or S)-oxo-oxazolidin-5-yl)-piperidine;

[3R, 4R]-1-Heptyl-3-cyanomethyl-4-[3-(R/S)-hydroxy-3-(6-methoxyquinolin-4-yl)propyl]piperidine;

[3R, 4R]-1-Heptyl-3-cyanomethyl-4-(2-(R)-hydroxy-3-(6-methoxyquinolin-4-yl)propyl]piperidine;

N-(cis-3-(R/S)-Carboxy-1-heptyl-4-(S/R)-piperidyl)-N'-(6-methoxyquinolin-4-yl)urea; cis-3-(R/S)-Ethoxycarbonyl-1-heptyl-4-(S/R)-(6-methoxyquinolin-4-yl)aminocarbonyl-oxypiperidine;

cis-3-(R/S)-Carboxy-1-heptyl-4-(S/R)-(6-methoxyquinolin-4-yl)aminocarbonyl-oxypiperidine;

a compound of Examples 18 to 36 from Table 1 as depicted below:

Example	A-B	n	R <sup>1</sup>	D	R <sup>3</sup>	R <sup>4</sup>
18	CH <sub>2</sub> CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH <sub>2</sub> CN	n-heptyl
19	CH(NH <sub>2</sub> )CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH <sub>2</sub> CN	n-heptyl
20	CH <sub>2</sub> CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH <sub>2</sub> COOH	5-methylhexyl
21	CH(N <sub>3</sub> )CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH <sub>2</sub> CN	n-heptyl
22	CH <sub>2</sub> CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CONH <sub>2</sub>	n-heptyl
23	CH <sub>2</sub> CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH <sub>2</sub> COOH	n-hexyl
24	COCH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH <sub>2</sub> CN	n-heptyl
25	CH <sub>2</sub> CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH <sub>2</sub> CH(CH <sub>3</sub> )COOH	n-heptyl

26	CH <sub>2</sub> CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH <sub>2</sub> COOH	cinnamyl
27	CH <sub>2</sub> CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH <sub>2</sub> COOH	3-phenylpropyl
28	CH(OH)CH2	1	CH <sub>3</sub> O	С	CH <sub>2</sub> COOH	n-heptyl
29	CH(NH <sub>2</sub> )CH <sub>2</sub>	1	CH <sub>3</sub> O	C	CH <sub>2</sub> COOH	n-heptyl
30	CH(OH)CH <sub>2</sub>	1	CH <sub>3</sub> O	С	CH(OH)COOH	n-heptyl
31	COCH <sub>2</sub>	1	CH <sub>3</sub> O	C	СН(ОН)СООН	n-heptyl
32	CH <sub>2</sub> CH(OH)	1	CH <sub>3</sub> O	С	CH <sub>2</sub> COOH	n-heptyl
33	NHCO	1	CH <sub>3</sub> O	N	CH <sub>2</sub> COOH	n-heptyl
34	CH <sub>2</sub> CH <sub>2</sub>	1	ОН	С	CH <sub>2</sub> COOH	n-heptyl
35	NHCOO	0	CH <sub>3</sub> O	C	CONH <sub>2</sub>	n-heptyl
36	oxirane	1	CH <sub>3</sub> O	С	CH <sub>2</sub> CN	n-heptyl

or a pharmaceutically acceptable derivative of any of the foregoing compounds.

## 22. (Cancelled).

23. (Previously presented) A pharmaceutical composition comprising a compound of formula (I) of claim 1, or a pharmaceutically acceptable derivative thereof wherein  $R^3$  is other than (C<sub>1-6</sub>)alkoxycarbonyl; optionally substituted aminocarbonyl, CN or COOH, and a pharmaceutically acceptable carrier.

## 24. (Cancelled).